

Client Success Story

# Santos Mining Company

**Beneficial Use of Coal Seam Gas Water**



**S1 and TCT partner in creating for Santos, the world's largest Irrigated Forestry Project**

## Client Background



SANTOS (South Australia Northern Territory Oil Search) Limited was first founded in 1954 as an energy exploration company. Today, Santos has oil and gas production interests throughout the world, including Indonesia, PNG, Vietnam, India, Bangladesh, Kyrgyzstan and Egypt. The company is headquartered in Adelaide, South Australia and it is one of Australia's largest mining companies. It is also the largest domestic gas producer to all mainland states and territories within the country.

Santos has embarked upon an ambitious \$7.7 billion LNG (liquefied natural gas) facility in Gladstone, Queensland, that will process CSG (Coal Seam Gas) from SE Queensland. With a workforce of more than 1,750 employees and a market capitalisation of \$8.3 billion in December 2007, Santos is a Top 40 ASX listed company.



## Business Challenge

The process of extracting CSG produces water as a by-product. Tree Crop Technologies Pty Ltd (TCT) developed a comprehensive plan and schedule to treat the water and then drip irrigate about 2 million Chinchilla white gum trees. The plan included establishing approximately 2,000 hectares of drip irrigated hardwood plantations and 400 hectares of centre pivot irrigated Leucaena on its coal and gas fields. The primary objectives were to manage produced water from CSG production from leases and to develop a forest carbon sink that may eventually be used to offset Santos emissions in the AETS (Australian Emission Trading Scheme) to be introduced in 2010.

Additional outcomes included the restoration of cleared land to forest cover, enhancement of biodiversity by re-establishment of a forest structure, expansion of wildlife corridors via forest vegetation links, conversion from open pasture to forest grazing and possible future timber production. This was clearly a project for the public good as well as a cost effective manner of beneficially using CSG water.

## How S1 *momentum* Methodology Assisted

Using the **S1 *momentum*** methodology, S1 Consulting & Software Services Pty Ltd (S1) designed a comprehensive plan to incorporate the use of world's best practice project management techniques together with software and hardware technology to manage all staff, contractors and equipment on-site in outback Queensland.

The scale of this project is very large. It is in fact the world's largest Irrigated Forestry project and it is predicted that the project would multiply in size as more gas fields are exploited in the near future.

One of the difficulties in project managing the creation of this large tree plantation is the biological constraints that are ever present, along with the usual time frames, supply chain efficiencies in outback Australia and weather conditions.



## Significant Breakthrough Achieved

S1's experienced team of Project Managers, Stakeholders' Liaison Officers and industry experts assisted TCT and Santos with technology infrastructure, software design, staff infrastructure and online support.



Dr Glenn Dale, Managing Director of TCT says: "S1's team of industry experts, their technological know-how and especially the **S1 *momentum*** methodology made my job easier, allowing TCT to concentrate on the overall field progress whilst their team managed time spent on administration and project management.

Over the next 30 years, S1 estimates that Santos will enjoy strong returns from profits gained from both timber production and carbon sales. Carbon Dioxide sequestration through this Irrigated Forestry project is highly cost effective, between \$7-\$10 per ton of CO2 sequestered.

*S1 is a global consulting, technology and outsourcing company with broad business and project management expertise.*